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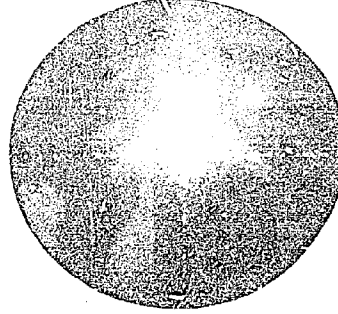
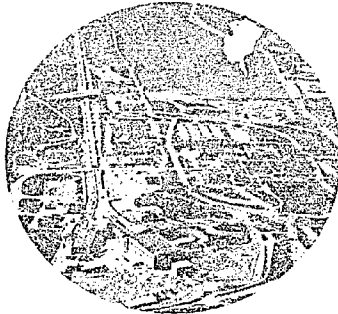
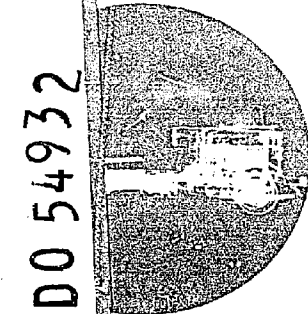
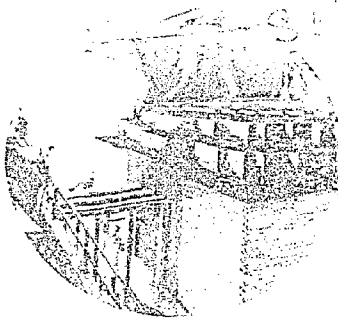
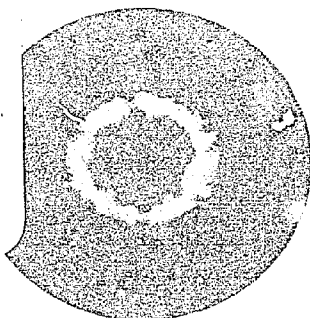
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ABSTRACT

This index was prepared for the set of 51 booklets in the "Understanding the Atom Series" published by the U. S. Atomic Energy Commission for high school students and their teachers. In addition to the index, a complete list of the series is provided in which the booklets are grouped into the categories of physics, chemistry, biology, nuclear reactors, the environment, and general interest. This listing also indicates if a booklet is advanced (A) or easy (E). The foreign language editions are included in a list of nine booklets available in French and of the 15 available in Spanish.
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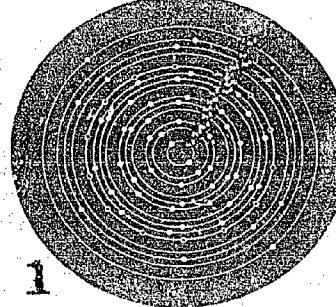
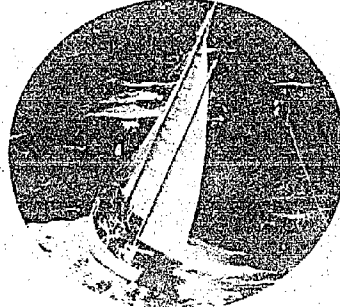
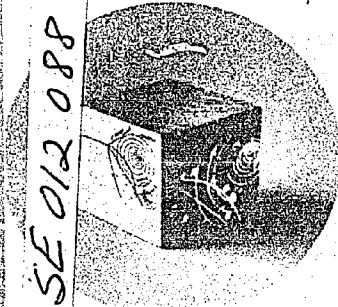
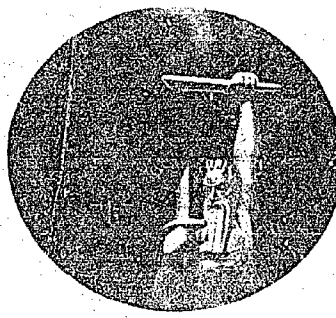
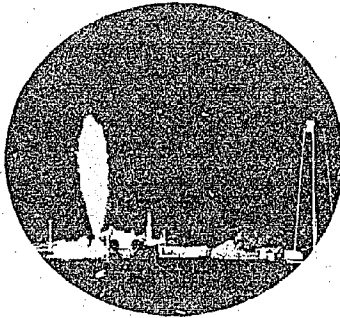
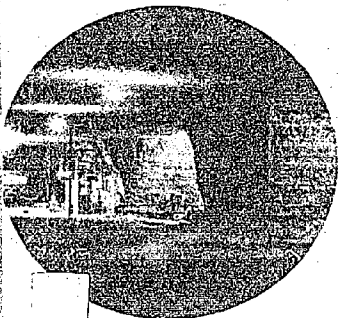
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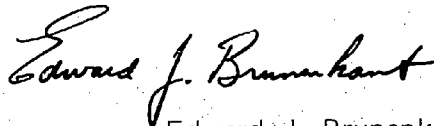


SE 012 088

The Understanding the Atom Series

Nuclear energy is playing a vital role in the life of every man, woman, and child in the United States today. In the years ahead it will affect increasingly all the peoples of the earth. It is essential that all Americans gain an understanding of this vital force if they are to discharge thoughtfully their responsibilities as citizens and if they are to realize fully the myriad benefits that nuclear energy offers them.

The United States Atomic Energy Commission provides this booklet to help you achieve such understanding.



Edward J. Brunenkant, Director
Division of Technical Information

UNITED STATES ATOMIC ENERGY COMMISSION

Dr. Glenn T. Seaborg, Chairman
James T. Ramey
Wilfrid E. Johnson
Dr. Theos J. Thompson
Dr. Clarence E. Larson

Index to the Understanding the Atom Series

INTRODUCTION

The U. S. Atomic Energy Commission publishes the Understanding the Atom Series of educational booklets for high school science students and their teachers. This series explains many aspects of nuclear science including its history and applications. These booklets are described on page 30.

Because these 51 booklets cover such a variety of scientific fields, this index was prepared to help the reader find quickly those booklets that contain the information he needs.

The booklets are identified by a lettered code in the index. On the next two pages are lists of the booklets in alphabetical order by title and by code.

Information on obtaining these booklets and other educational materials is on page 30.

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Abbreviation Listing by Title

ACCELERATORS	ACC
ANIMALS IN ATOMIC RESEARCH	AAR
THE ATOM AND THE OCEAN	AAO
ATOMIC FUEL	ATF
ATOMIC POWER SAFETY	APS
ATOMS AT THE SCIENCE FAIR, EXHIBITING	ASF
NUCLEAR PROJECTS	AIA
ATOMS IN AGRICULTURE	ANM
ATOMS, NATURE, AND MAN	BAE
BOOKS ON ATOMIC ENERGY FOR ADULTS AND CHILDREN	CAE
CAREERS IN ATOMIC ENERGY	CNG
THE CHEMISTRY OF THE NOBLE GASES	COM
COMPUTERS	CNF
CONTROLLED NUCLEAR FUSION	CRY
CRYOGENICS	DCE
DIRECT CONVERSION OF ENERGY	ELN
THE ELUSIVE NEUTRINO	FNT
FALLOUT FROM NUCLEAR TESTS	FRE
THE FIRST REACTOR	FPI
FOOD PRESERVATION BY IRRADIATION	GER
THE GENETIC EFFECTS OF RADIATION	LAS
LASERS	MSM
MICROSTRUCTURE OF MATTER	NRE
THE NATURAL RADIATION ENVIRONMENT	NAA
NEUTRON ACTIVATION ANALYSIS	NDT
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NUCLEAR CLOCKS	NED
NUCLEAR ENERGY FOR DOMESTIC USE	NPE
NUCLEAR POWER AND THE ENVIRONMENT	NPS
NUCLEAR POWER AND MERCHANT SHIPPING	NPP
NUCLEAR POWER PLANTS	NPR
NUCLEAR PROPULSION FOR SPACE	NRC
NUCLEAR REACTORS	NTG
NUCLEAR TERMS, A GLOSSARY	OAW
OUR ATOMIC WORLD, THE STORY OF ATOMIC ENERGY	PSH
PLOWSHARE	PLU
PLUTONIUM	PFR
POWER FROM RADIOISOTOPES	PRP
POWER REACTORS IN SMALL PACKAGES	RAW
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RADIOISOTOPES AND LIFE PROCESSES	RII
RADIOISOTOPES IN INDUSTRY	RIM
RADIOISOTOPES IN MEDICINE	REA
RARE EARTHS, THE FRATERNAL FIFTEEN	RER
RESEARCH REACTORS	SNP
SNAP: NUCLEAR SPACE REACTORS	SNF
SOURCES OF NUCLEAR FUEL	SPR
SPACE RADIATION	SPC
SPECTROSCOPY	STE
SYNTHETIC TRANSURANIUM ELEMENTS	WBC
WHOLE BODY COUNTERS	YBR
YOUR BODY AND RADIATION	

Abbreviation Listing by Code

AAO	THE ATOM AND THE OCEAN
AAR	ANIMALS IN ATOMIC RESEARCH
ACC	ACCELERATORS
AIA	ATOMS IN AGRICULTURE
ANM	ATOMS, NATURE, AND MAN
APS	ATOMIC POWER SAFETY
ASF	ATOMS AT THE SCIENCE FAIR, EXHIBITING NUCLEAR PROJECTS
ATF	ATOMIC FUEL
BAE	BOOKS ON ATOMIC ENERGY FOR ADULTS AND CHILDREN
CAE	CAREERS IN ATOMIC ENERGY
CNF	CONTROLLED NUCLEAR FUSION
CNG	THE CHEMISTRY OF THE NOBLE GASES
COM	COMPUTERS
CRY	CRYOGENICS
DCE	DIRECT CONVERSION OF ENERGY
ELN	THE ELUSIVE NEUTRINO
FNT	FALLOUT FROM NUCLEAR TESTS
FPI	FOOD PRESERVATION BY IRRADIATION
FRE	THE FIRST REACTOR
GER	THE GENETIC EFFECTS OF RADIATION
LAS	LASERS
MSM	MICROSTRUCTURE OF MATTER
NAA	NEUTRON ACTIVATION ANALYSIS
NCL	NUCLEAR CLOCKS
NDT	NONDESTRUCTIVE TESTING
NED	NUCLEAR ENERGY FOR DESALTING
NPE	NUCLEAR POWER AND THE ENVIRONMENT
NPP	NUCLEAR POWER PLANTS
NPR	NUCLEAR PROPULSION FOR SPACE
NPS	NUCLEAR POWER AND MERCHANT SHIPPING
NRC	NUCLEAR REACTORS
NRE	THE NATURAL RADIATION ENVIRONMENT
NTG	NUCLEAR TERMS, A GLOSSARY
OAW	OUR ATOMIC WORLD, THE STORY OF ATOMIC ENERGY
PFR	POWER FROM RADIOISOTOPES
PLU	PLUTONIUM
PRP	POWER REACTORS IN SMALL PACKAGES
PSH	PLOWSHARE
RAW	RADIOACTIVE WASTES
REA	RARE EARTHS, THE FRATERNAL FIFTEEN
RER	RESEARCH REACTORS
RIL	RADIOISOTOPES IN INDUSTRY
RIM	RADIOISOTOPES IN MEDICINE
RLP	RADIOISOTOPES AND LIFE PROCESSES
SNF	SOURCES OF NUCLEAR FUEL
SNP	SNAP: NUCLEAR SPACE REACTORS
SPC	SPECTROSCOPY
SPR	SPACE RADIATION
STE	SYNTHETIC TRANSURANIUM ELEMENTS
WBC	WHOLE BODY COUNTERS
YBR	YOUR BODY AND RADIATION






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ATOMS AT THE SCIENCE FAIR An exhibit guide that includes ideas for nuclear science projects. (E)

BOOKS ON ATOMIC ENERGY FOR ADULTS AND CHILDREN A reading list of commercially available books. (E)

CAREERS IN ATOMIC ENERGY, PLANNING FOR SCIENTIFIC AND TECHNICAL PROFESSIONS Opportunities in the nuclear field for young people. (E)

COMPUTERS How electronic brains work. (A)

NUCLEAR TERMS, A GLOSSARY Definitions of four hundred terms. (A)

OUR ATOMIC WORLD, THE STORY OF ATOMIC ENERGY A history of the development of nuclear energy. (E)

Foreign Language Editions

The Understanding the Atom booklets that have been translated into French and Spanish are listed below. Teachers and librarians may request a free set by writing to us on school or library stationery.

All others may generally obtain free, single copies of up to three titles of their choice. Those wishing to obtain larger quantities may purchase them if stocks are available. Orders for booklets and inquiries on prices and availability should be sent to the address on page 33.

French

Les Accélérateurs (Accelerators)

Le Combustible Nucléaire (Atomic Fuel)

Les Atomes et l'Agriculture (Atoms in Agriculture)

Conversion Directe d'Energie (Direct Conversion of Energy)

Analyse d'Activation par les Neutrons (Neutron Activation Analysis)

L'Energie Nucléaire pour la Désalinisation (Nuclear Energy for Desalting)

Les Reacteurs Nucléaires aux Etats Unis (Nuclear Reactors, USA)

Notre Monde Atomique (Our Atomic World)

SNAP—Réacteurs Nucléaires Spatiaux (SNAP—Nuclear Space Reactors)

Spanish

Aceleradores (Accelerators)
Combustibles Nucleares (Atomic Fuel)
El Atomo en la Feria Cientifica (Atoms at the Science Fair)
Los Atomos y la Agricultura (Atoms in Agriculture)
Conversión Directa de la Energía (Direct Conversion of Energy)
Conservación de Alimentos por Irradiación (Food Preservation by Irradiation)
Efectos Genéticos de las Radiaciones (The Genetic Effects of Radiation)
Análisis por Activación con Neutrones (Neutron Activation Analysis)
Energía Nuclear para la Desalinización (Nuclear Energy for Desalting)
Reactores Nucleares—EE. UU. (Nuclear Reactors, USA)
Nuestro Mundo Atómico (Our Atomic World)
Plowshare
Los Radioisótopos en Medicina (Radioisotopes in Medicine)
Plantas de Energía Nuclear (Nuclear Power Plants)
La Radiación y el Organismo Humano (Your Body and Radiation)

OTHER EDUCATIONAL MATERIALS

Assembled packets of educational materials are provided for high school teachers in four areas: general science, biology, chemistry, and physics. Packets have also been assembled for junior-high teachers in these areas: life, physical, and earth sciences. Included in all these packets are such items as appropriate Understanding the Atom booklets, workbooks, and line drawings that illustrate the applications of radioisotopes in the life and physical sciences.

Information on nuclear science is also available on motion picture film. The AEC has 10 film libraries in the United States from which 16-mm films may be borrowed free. The catalogue, "Classroom Films on Nuclear Science", which is free, describes more than 50 films for student audiences at the elementary, junior high, senior high, college, and university levels. Related Understanding the Atom booklets are listed in the catalog with many of the films.

Requests for educational materials should be sent to the United States Atomic Energy Commission—Technical Information, Oak Ridge, Tennessee 37830.

This booklet is one of the "Understanding the Atom" Series. Comments are invited on this booklet and others in the series; please send them to the Division of Technical Information, U. S. Atomic Energy Commission, Washington, D. C. 20545.

Published as part of the AEC's educational assistance program, the series includes these titles:

<i>Accelerators</i>	<i>Nuclear Propulsion for Space</i>
<i>Animals in Atomic Research</i>	<i>Nuclear Reactors</i>
<i>Atomic Fuel</i>	<i>Nuclear Terms, A Brief Glossary</i>
<i>Atomic Power Safety</i>	<i>Our Atomic World</i>
<i>Atoms at the Science Fair</i>	<i>Plowshare</i>
<i>Atoms in Agriculture</i>	<i>Plutonium</i>
<i>Atoms, Nature, and Man</i>	<i>Power from Radioisotopes</i>
<i>Books on Atomic Energy for Adults</i>	<i>Power Reactors in Small Packages</i>
<i>and Children</i>	<i>Radioactive Wastes</i>
<i>Careers in Atomic Energy</i>	<i>Radioisotopes and Life Processes</i>
<i>Computers</i>	<i>Radioisotopes in Industry</i>
<i>Controlled Nuclear Fusion</i>	<i>Radioisotopes in Medicine</i>
<i>Cryogenics, The Uncommon Cold</i>	<i>Rare Earths</i>
<i>Direct Conversion of Energy</i>	<i>Research Reactors</i>
<i>Fallout From Nuclear Tests</i>	<i>SNAF, Nuclear Space Reactors</i>
<i>Food Preservation by Irradiation</i>	<i>Sources of Nuclear Fuel</i>
<i>Genetic Effects of Radiation</i>	<i>Space Radiation</i>
<i>Index to the UAS Series</i>	<i>Spectroscopy</i>
<i>Lasers</i>	<i>Synthetic Transuranium Elements</i>
<i>Microstructure of Matter</i>	<i>The Atom and the Ocean</i>
<i>Neutron Activation Analysis</i>	<i>The Chemistry of the Noble Gases</i>
<i>Nondestructive Testing</i>	<i>The Elusive Neutrino</i>
<i>Nuclear Clocks</i>	<i>The First Reactor</i>
<i>Nuclear Energy for Desalting</i>	<i>The Natural Radiation Environment</i>
<i>Nuclear Power and Merchant Shipping</i>	<i>Whole Body Counters</i>
<i>Nuclear Power Plants</i>	<i>Your Body and Radiation</i>

A single copy of any one booklet, or of no more than three different booklets, may be obtained free by writing to:

USAEC, P. O. BOX 62, OAK RIDGE, TENNESSEE 37830

Complete sets of the series are available to school and public librarians, and to teachers who can make them available for reference or for use by groups. Requests should be made on school or library letterheads and indicate the proposed use.

Students and teachers who need other material on specific aspects of nuclear science, or references to other reading material, may also write to the Oak Ridge address. Requests should state the topic of interest exactly, and the use intended.

In all requests, include "Zip Code" in return address.

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